

Caner risk (adult)										
RME										
fish conc	food prep loss	meal size	meals per month	mo/yr fish taken from river	ave. daily consumption	number of years consuming fish	averaging time	body weight	slope factor	risk
mg/kg		kg			kg/d	yr	yr	kg	(mg/kg/d)^-1	
1	0	0.227	4	12	0.0299	64	70	70	2	7.8E-04
CTE										
fish conc	food prep loss	meal size	meals per month	mo/yr fish taken from river	ave. daily consumption	number of years consuming fish	averaging time	body weight	slope factor	risk
mg/kg		kg			kg/d	yr	yr	kg	(mg/kg/d)^-1	
1	0.24	0.227	2	6	0.0075	25	70	70	1	5.8E-05
Non-cancer risk (adult)										
RME										
fish conc	food prep loss	meal size	meals per month	mo/yr fish taken from river	ave. daily consumption	number of years consuming fish	averaging time	body weight	RfD	HI
mg/kg		kg			kg/d	yr	yr	kg	(mg/kg/d)	
1	0	0.227	4	12	0.0299	1	1	70	2.00E-05	21.3
CTE										
fish conc	food prep loss	meal size	meals per month	mo/yr fish taken from river	ave. daily consumption	number of years consuming fish	averaging time	body weight	RfD	HI
mg/kg		kg			kg/d	yr	yr	kg	(mg/kg/d)	
1	0.24	0.227	2	12	0.0149	1	1	70	2.00E-05	8.1

Comparison to HHRA

Uncertainty Analysis Targeted at the RME and CTE		West Cornwall/Bulls Bridge, Bass Consumption		
95% credibility interval [risk coefficients uncertain]	95% credibility interval [risk coefficients constant]	HHRA point estimates	PBA (90th, 99th percentile) lowest lower to highest upper bound	PBA (95th percentile)
RISK RME 1.1 E-5 to 1.3 E-3	RISK RME 8.6 E-5, 1.4 E-3	1 E-3	3 E-5, 1.8E-2	4.1 E-5, 4.2 E-3
RISK CTE 8.7 E-7 to 1.3 E-4	RISK CTE 5.5 E-6, 1.7 E-4	9 E-5	PBA (25th, 75th percentile) 2.2 E-6, 6.8 E-4	PBA (50th percentile) 5.3 E-6, 2.9 E-4
Non-Cancer Hazard Index		Non-Cancer Hazard Index		
HI RME 0.24 to 36	HI RME 4.4, 54	26	PBA (90th, 99th percentile) 8.2, 370	PBA (95th percentile) 13, 72
HI CTE 0.035 to 7.0	HI CTE 0.62, 11	12	PBA (25th, 75th percentile) 0.45, 13	PBA (50th percentile) 1.4, 5.1

Crystal Ball Report

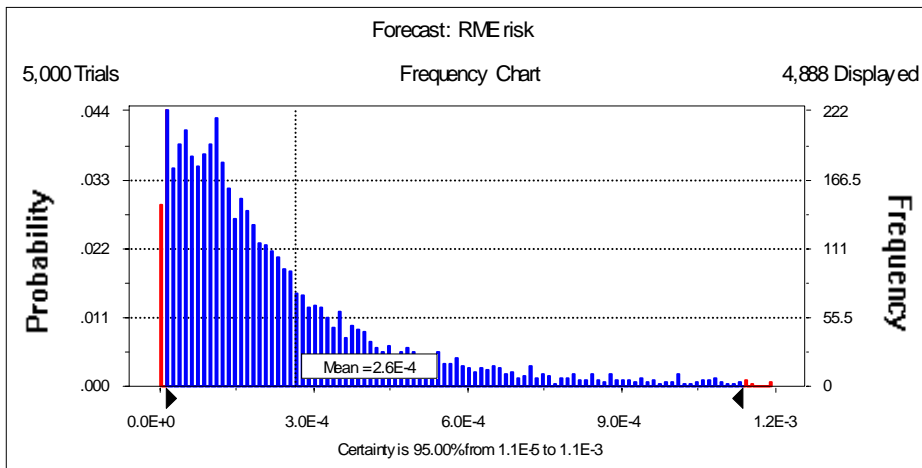
Simulation started on 11/16/03 at 14:44:35
Simulation stopped on 11/16/03 at 14:44:37

Forecast: RME risk

Cell: K5

Summary:

Certainty Level is 95.00%
Certainty Range is from 1.1E-5 to 1.1E-3
Display Range is from 0.0E+0 to 1.2E-3
Entire Range is from 1.9E-6 to 7.7E-3
After 5,000 Trials, the Std. Error of the Mean is 4.8E-6



Percentiles:

<u>Percentile</u>	<u>Value</u>
0.0%	1.9E-06
2.5%	1.1E-05
5.0%	1.7E-05
50.0%	1.6E-04
95.0%	8.4E-04
97.5%	1.1E-03
100.0%	7.7E-03

End of Forecast

Forecast: CTE risk**Cell: K10**

Summary:

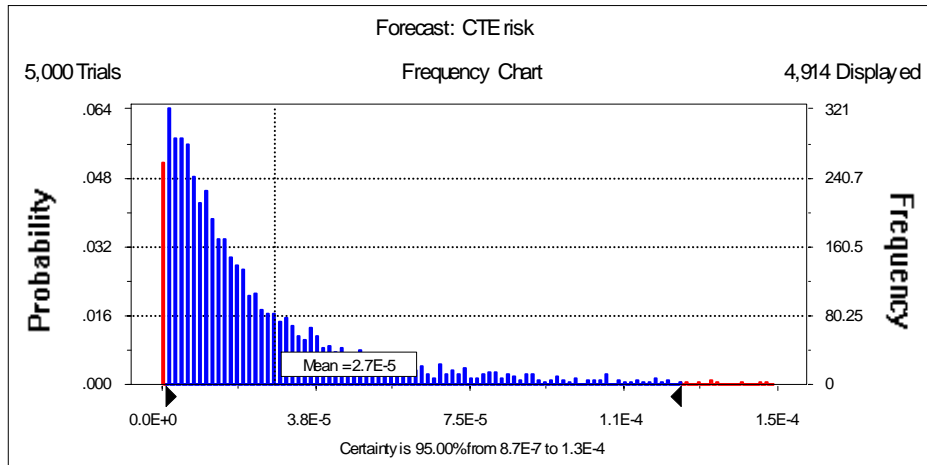
Certainty Level is 95.00%

Certainty Range is from 8.7E-7 to 1.3E-4

Display Range is from 0.0E+0 to 1.5E-4

Entire Range is from 9.6E-8 to 4.8E-4

After 5,000 Trials, the Std. Error of the Mean is 5.4E-7



Percentiles:

<u>Percentile</u>	<u>Value</u>
0.0%	9.6E-08
2.5%	8.7E-07
5.0%	1.4E-06
50.0%	1.5E-05
95.0%	9.1E-05
97.5%	1.3E-04
100.0%	4.8E-04

End of Forecast

Forecast: HI RME**Cell: K17**

Summary:

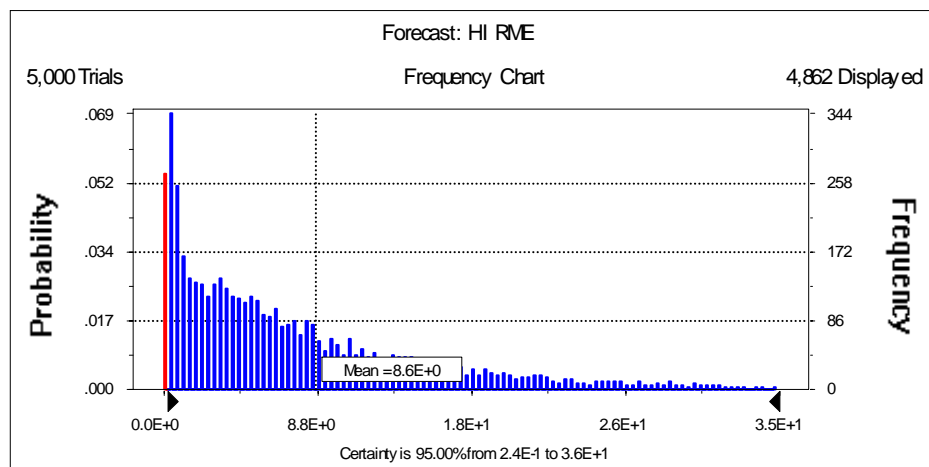
Certainty Level is 95.00%

Certainty Range is from 2.4E-1 to 3.6E+1

Display Range is from 0.0E+0 to 3.5E+1

Entire Range is from 3.2E-2 to 1.1E+2

After 5,000 Trials, the Std. Error of the Mean is 1.4E-1



Percentiles:

<u>Percentile</u>	<u>Value</u>
0.0%	3.2E-02
2.5%	2.4E-01
5.0%	3.3E-01
50.0%	5.6E+00
95.0%	2.8E+01
97.5%	3.6E+01
100.0%	1.1E+02

End of Forecast

Forecast: HI CTE**Cell: K22****Summary:**

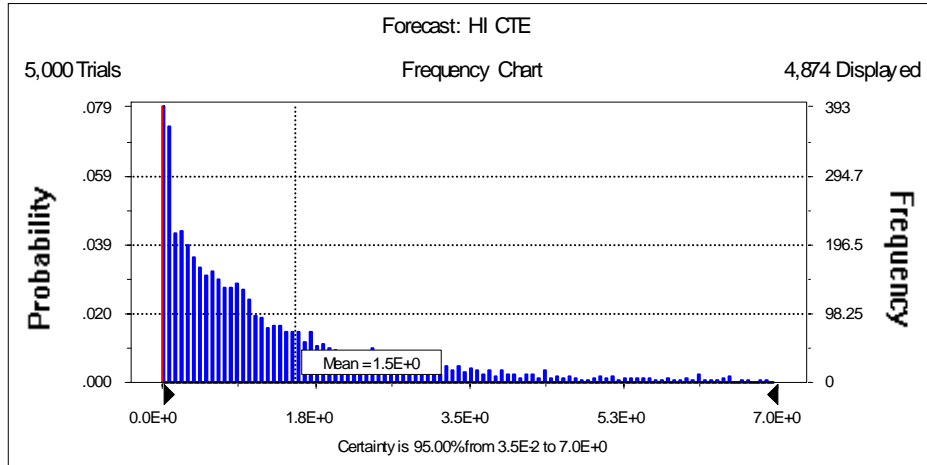
Certainty Level is 95.00%

Certainty Range is from 3.5E-2 to 7.0E+0

Display Range is from 0.0E+0 to 7.0E+0

Entire Range is from 4.7E-3 to 3.7E+1

After 5,000 Trials, the Std. Error of the Mean is 2.9E-2

**Percentiles:**

<u>Percentile</u>	<u>Value</u>
0.0%	4.7E-03
2.5%	3.5E-02
5.0%	5.3E-02
50.0%	8.6E-01
95.0%	5.3E+00
97.5%	7.0E+00
100.0%	3.7E+01

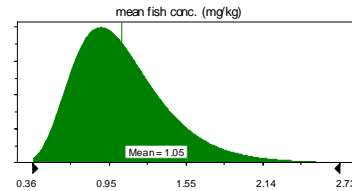
End of Forecast

Assumptions**Assumption: mean fish conc. (mg/kg)****Cell: A5**

Lognormal distribution with parameters:

Geometric Mean	1.00
Geometric Std. Dev.	1.40

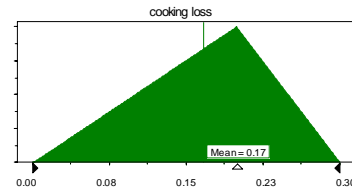
Selected range is from 0.00 to +Infinity

**Assumption: cooking loss****Cell: B5**

Triangular distribution with parameters:

Minimum	0.00
Likeliest	0.20
Maximum	0.30

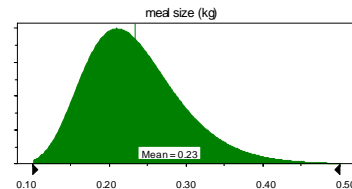
Selected range is from 0.00 to 0.30

**Assumption: meal size (kg)****Cell: C5**

Lognormal distribution with parameters:

Geometric Mean	0.23
Geometric Std. Dev.	1.30

Selected range is from 0.00 to +Infinity



Correlated with:

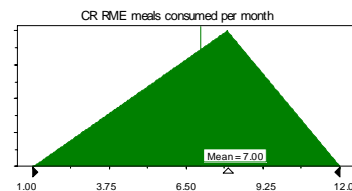
Body Weight (kg) (I5)	0.70
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Assumption: CR RME meals consumed per month**Cell: D5**

Triangular distribution with parameters:

Minimum	1.00
Likeliest	8.00
Maximum	12.00

Selected range is from 1.00 to 12.00

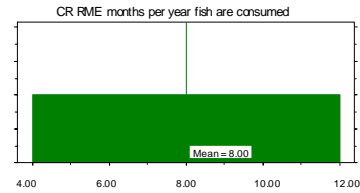


Assumption: CR RME months per year fish are consumed

Cell: E5

Uniform distribution with parameters:

Minimum 4.00
Maximum 12.00

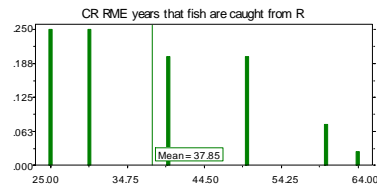


Assumption: CR RME years that fish are caught from R

Cell: G5

Custom distribution with parameters:

		Relative Prob.
Single point	25.00	0.250000
Single point	30.00	0.250000
Single point	40.00	0.200000
Single point	50.00	0.200000
Single point	60.00	0.075000
Single point	64.00	0.025000
Total Relative Probability		1.000000



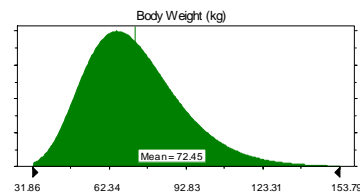
Assumption: Body Weight (kg)

Cell: I5

Lognormal distribution with parameters:

Geometric Mean 70.00
Geometric Std. Dev. 1.30

Selected range is from 0.00 to +Infinity



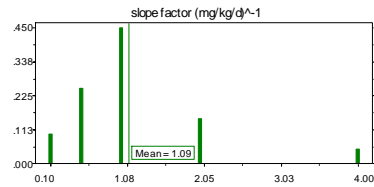
Correlated with:

meal size (kg) (C5) 0.70

Assumption: slope factor (mg/kg/d)^-1**Cell: J5**

Custom distribution with parameters:

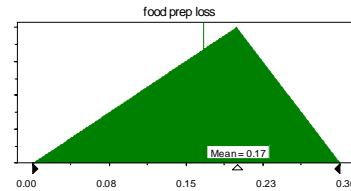
		<u>Relative Prob.</u>
Single point	0.10	0.100000
Single point	0.50	0.250000
Single point	1.00	0.450000
Single point	2.00	0.150000
Single point	4.00	0.050000
Total Relative Probability		1.000000

**Assumption: food prep loss****Cell: B10**

Triangular distribution with parameters:

Minimum	0.00
Likeliest	0.20
Maximum	0.30

Selected range is from 0.00 to 0.30

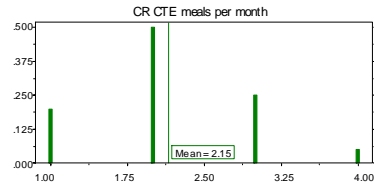
**Assumption: CR CTE meals per month****Cell: D10**

Custom distribution with parameters:

		<u>Relative Prob.</u>
Single point	1.00	0.200000
Single point	2.00	0.500000
Single point	3.00	0.250000
Single point	4.00	0.050000
Total Relative Probability		1.000000

Assumption: CR CTE meals per month (cont'd)

Cell: D10



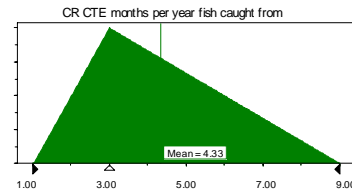
Assumption: CR CTE months per year fish caught from

Cell: E10

Triangular distribution with parameters:

Minimum	1.00
Likeliest	3.00
Maximum	9.00

Selected range is from 1.00 to 9.00

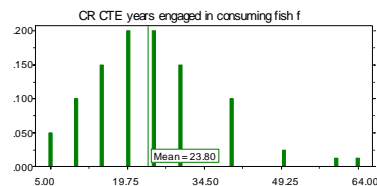


Assumption: CR CTE years engaged in consuming fish f

Cell: G10

Custom distribution with parameters:

		Relative Prob.
Single point	5.00	0.050000
Single point	10.00	0.100000
Single point	15.00	0.150000
Single point	20.00	0.200000
Single point	25.00	0.200000
Single point	30.00	0.150000
Single point	40.00	0.100000
Single point	50.00	0.025000
Single point	60.00	0.012500
Single point	64.00	0.012500
Total Relative Probability		1.000000

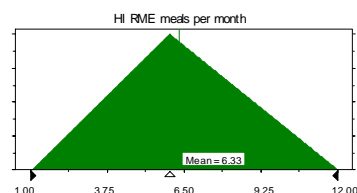


Assumption: HI RME meals per month**Cell: D17**

Triangular distribution with parameters:

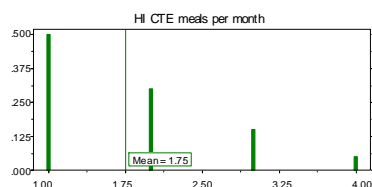
Minimum	1.00
Likeliest	6.00
Maximum	12.00

Selected range is from 1.00 to 12.00

**Assumption: HI CTE meals per month****Cell: D22**

Custom distribution with parameters:

Single point	1.00	<u>Relative Prob.</u>	0.500000
Single point	2.00		0.300000
Single point	3.00		0.150000
Single point	4.00		0.050000
Total Relative Probability			1.000000

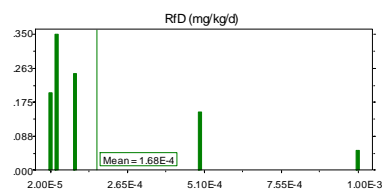
**Assumption: RfD (mg/kg/d)****Cell: J17**

Custom distribution with parameters:

Single point	2.00E-05	<u>Relative Prob.</u>	0.200000
Single point	4.00E-05		0.350000
Single point	1.00E-04		0.250000
Single point	5.00E-04		0.150000
Single point	1.00E-03		0.050000
Total Relative Probability			1.000000

Assumption: RfD (mg/kg/d) (cont'd)

Cell: J17

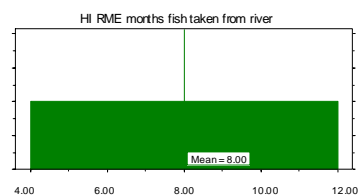


Assumption: HI RfE months fish taken from river

Cell: E17

Uniform distribution with parameters:

Minimum 4.00
Maximum 12.00



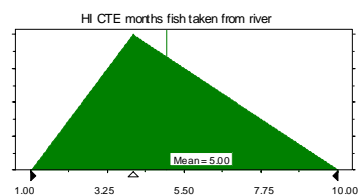
Assumption: HI CTE months fish taken from river

Cell: E22

Triangular distribution with parameters:

Minimum 1.00
Likeliest 4.00
Maximum 10.00

Selected range is from 1.00 to 10.00



End of Assumptions

Crystal Ball Report

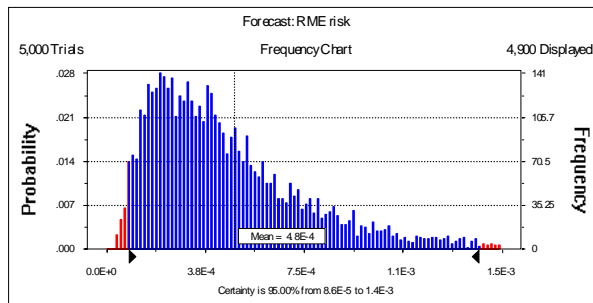
Simulation started on 11/17/03 at 9:13:03
Simulation stopped on 11/17/03 at 9:13:06

Forecast: RME risk

Cell: K5

Summary:

Certainty Level is 95.00%
Certainty Range is from 8.6E-5 to 1.4E-3
Display Range is from 0.0E+0 to 1.5E-3
Entire Range is from 2.7E-5 to 3.7E-3
After 5,000 Trials, the Std. Error of the Mean is 5.1E-6



Percentiles:

<u>Percentile</u>	<u>Value</u>
0.0%	2.7E-05
2.5%	8.6E-05
5.0%	1.1E-04
50.0%	3.9E-04
95.0%	1.2E-03
97.5%	1.4E-03
100.0%	3.7E-03

End of Forecast

Forecast: CTE risk**Cell: K10****Summary:**

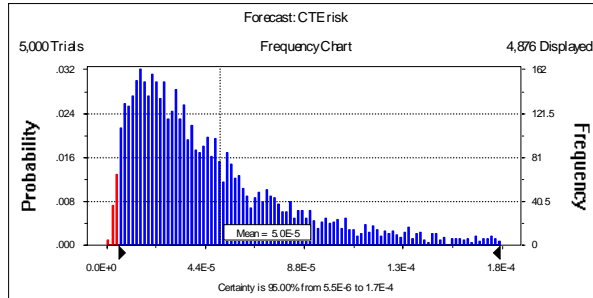
Certainty Level is 95.00%

Certainty Range is from 5.5E-6 to 1.7E-4

Display Range is from 0.0E+0 to 1.8E-4

Entire Range is from 1.0E-6 to 4.8E-4

After 5,000 Trials, the Std. Error of the Mean is 6.6E-7

**Percentiles:**

<u>Percentile</u>	<u>Value</u>
0.0%	1.0E-06
2.5%	5.5E-06
5.0%	7.4E-06
50.0%	3.6E-05
95.0%	1.4E-04
97.5%	1.7E-04
100.0%	4.8E-04

End of Forecast

Forecast: HI RME**Cell: K17**

Summary:

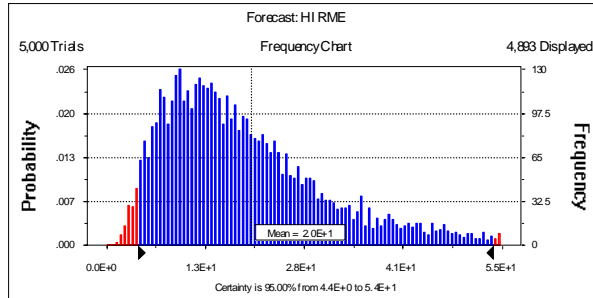
Certainty Level is 95.00%

Certainty Range is from 4.4E+0 to 5.4E+1

Display Range is from 0.0E+0 to 5.5E+1

Entire Range is from 1.1E+0 to 1.3E+2

After 5,000 Trials, the Std. Error of the Mean is 1.9E-1



Percentiles:

<u>Percentile</u>	<u>Value</u>
0.0%	1.1E+00
2.5%	4.4E+00
5.0%	5.4E+00
50.0%	1.7E+01
95.0%	4.6E+01
97.5%	5.4E+01
100.0%	1.3E+02

End of Forecast

Forecast: HI CTE**Cell: K22**

Summary:

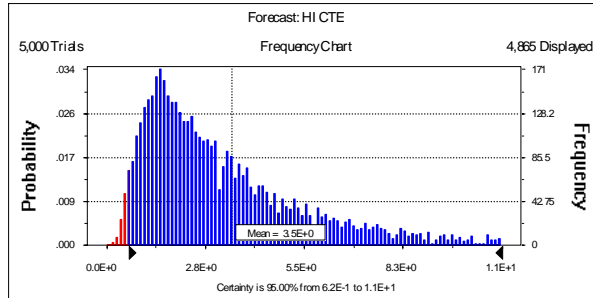
Certainty Level is 95.00%

Certainty Range is from 6.2E-1 to 1.1E+1

Display Range is from 0.0E+0 to 1.1E+1

Entire Range is from 1.7E-1 to 3.0E+1

After 5,000 Trials, the Std. Error of the Mean is 4.0E-2



Percentiles:

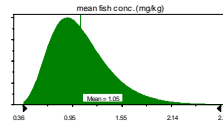
<u>Percentile</u>	<u>Value</u>
0.0%	1.7E-01
2.5%	6.2E-01
5.0%	7.8E-01
50.0%	2.6E+00
95.0%	9.0E+00
97.5%	1.1E+01
100.0%	3.0E+01

End of Forecast

Assumptions**Assumption: mean fish conc. (mg/kg)****Cell: A5**

Lognormal distribution with parameters:

Geometric Mean	1.00
Geometric Std. Dev.	1.40

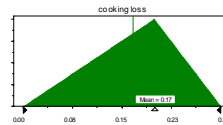


Selected range is from 0.00 to +Infinity

Assumption: cooking loss**Cell: B5**

Triangular distribution with parameters:

Minimum	0.00
Likeliest	0.20
Maximum	0.30

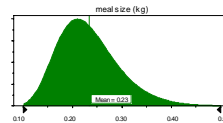


Selected range is from 0.00 to 0.30

Assumption: meal size (kg)**Cell: C5**

Lognormal distribution with parameters:

Geometric Mean	0.23
Geometric Std. Dev.	1.30



Selected range is from 0.00 to +Infinity

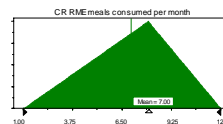
Correlated with:

Body Weight (kg) (I5)	0.70
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Assumption: CR RME meals consumed per month**Cell: D5**

Triangular distribution with parameters:

Minimum	1.00
Likeliest	8.00
Maximum	12.00

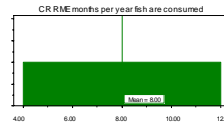


Selected range is from 1.00 to 12.00

Assumption: CR RME months per year fish are consumed**Cell: E5**

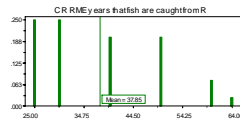
Uniform distribution with parameters:

Minimum 4.00
Maximum 12.00

**Assumption: CR RME years that fish are caught from R****Cell: G5**

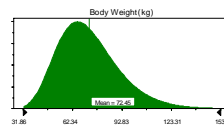
Custom distribution with parameters:

		<u>Relative Prob.</u>
Single point	25.00	0.250000
Single point	30.00	0.250000
Single point	40.00	0.200000
Single point	50.00	0.200000
Single point	60.00	0.075000
Single point	64.00	0.025000
Total Relative Probability		1.000000

**Assumption: Body Weight (kg)****Cell: I5**

Lognormal distribution with parameters:

Geometric Mean 70.00
Geometric Std. Dev. 1.30



Selected range is from 0.00 to +Infinity

Correlated with:

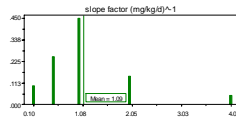
meal size (kg) (C5) 0.70

Assumption: slope factor (mg/kg/d)^-1**Cell: J5**

Custom distribution with parameters:

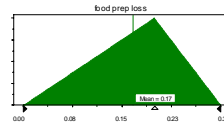
		<u>Relative Prob.</u>
Single point	0.10	0.100000
Single point	0.50	0.250000
Single point	1.00	0.450000
Single point	2.00	0.150000
Single point	4.00	0.050000
Total Relative Probability		1.000000

** Frozen Assumption ** value used was 2.00

**Assumption: food prep loss****Cell: B10**

Triangular distribution with parameters:

Minimum	0.00
Likeliest	0.20
Maximum	0.30

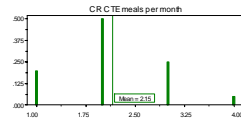


Selected range is from 0.00 to 0.30

Assumption: CR CTE meals per month**Cell: D10**

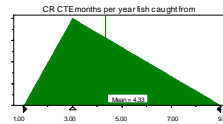
Custom distribution with parameters:

		<u>Relative Prob.</u>
Single point	1.00	0.200000
Single point	2.00	0.500000
Single point	3.00	0.250000
Single point	4.00	0.050000
Total Relative Probability		1.000000

Assumption: CR CTE meals per month (cont'd)**Cell: D10****Assumption: CR CTE months per year fish caught from****Cell: E10**

Triangular distribution with parameters:

Minimum	1.00
Likeliest	3.00
Maximum	9.00

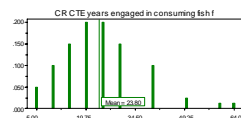


Selected range is from 1.00 to 9.00

Assumption: CR CTE years engaged in consuming fish f**Cell: G10**

Custom distribution with parameters:

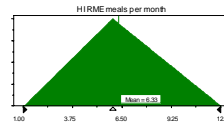
		<u>Relative Prob.</u>
Single point	5.00	0.050000
Single point	10.00	0.100000
Single point	15.00	0.150000
Single point	20.00	0.200000
Single point	25.00	0.200000
Single point	30.00	0.150000
Single point	40.00	0.100000
Single point	50.00	0.025000
Single point	60.00	0.012500
Single point	64.00	0.012500
Total Relative Probability		1.000000



Assumption: HI RME meals per month**Cell: D17**

Triangular distribution with parameters:

Minimum	1.00
Likeliest	6.00
Maximum	12.00

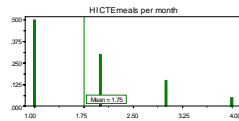


Selected range is from 1.00 to 12.00

Assumption: HI CTE meals per month**Cell: D22**

Custom distribution with parameters:

		<u>Relative Prob.</u>
Single point	1.00	0.500000
Single point	2.00	0.300000
Single point	3.00	0.150000
Single point	4.00	0.050000
Total Relative Probability		1.000000

**Assumption: RfD (mg/kg/d)****Cell: J17**

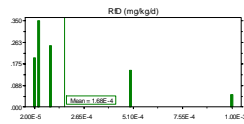
Custom distribution with parameters:

		<u>Relative Prob.</u>
Single point	2.00E-05	0.200000
Single point	4.00E-05	0.350000
Single point	1.00E-04	0.250000
Single point	5.00E-04	0.150000
Single point	1.00E-03	0.050000
Total Relative Probability		1.000000

** Frozen Assumption ** value used was 2.00E-5

Assumption: RfD (mg/kg/d) (cont'd)

Cell: J17

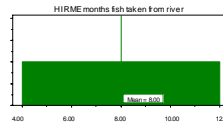


Assumption: HI RME months fish taken from river

Cell: E17

Uniform distribution with parameters:

Minimum 4.00
Maximum 12.00



Assumption: HI CTE months fish taken from river

Cell: E22

Triangular distribution with parameters:

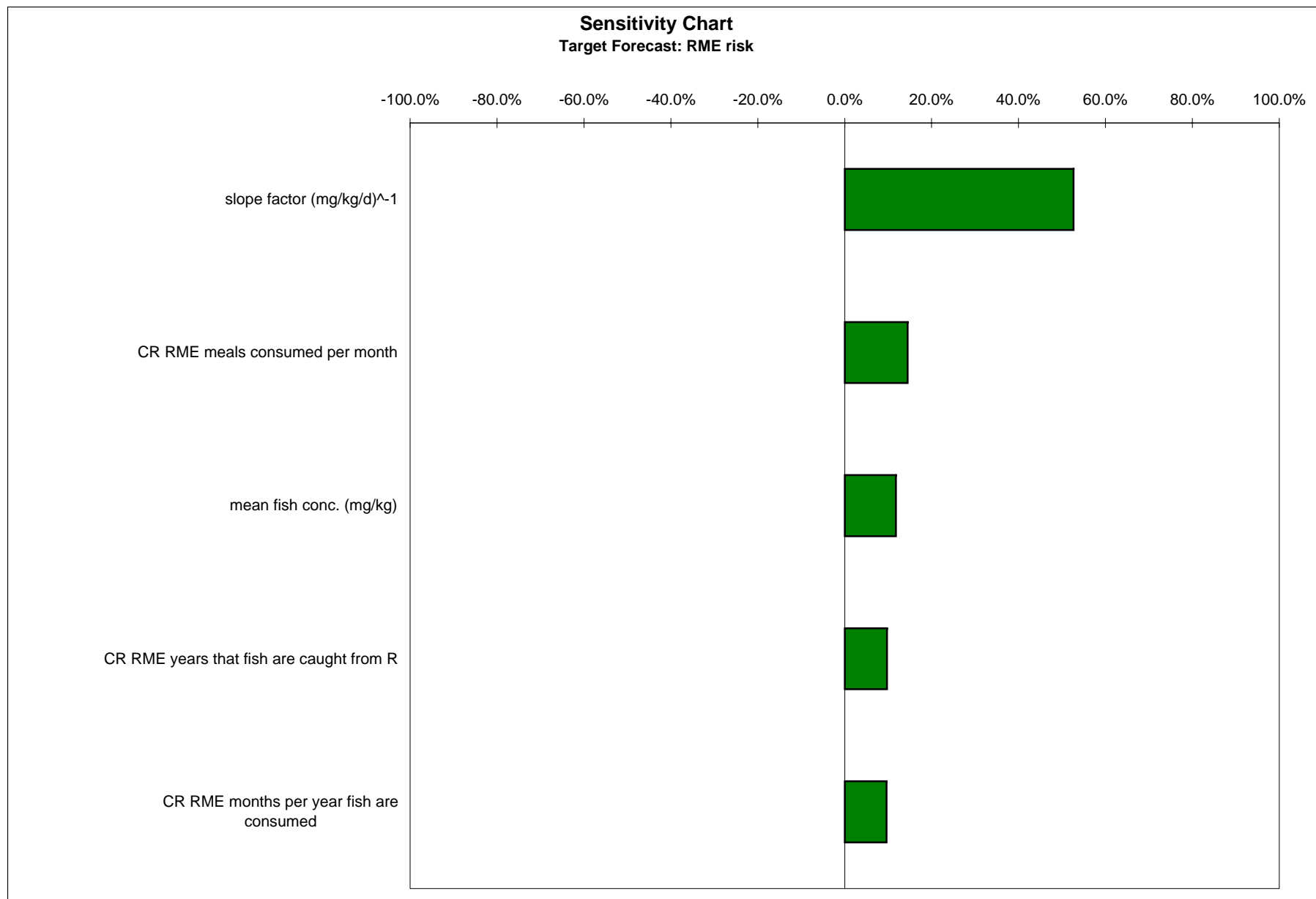
Minimum 1.00
Likeliest 4.00
Maximum 10.00



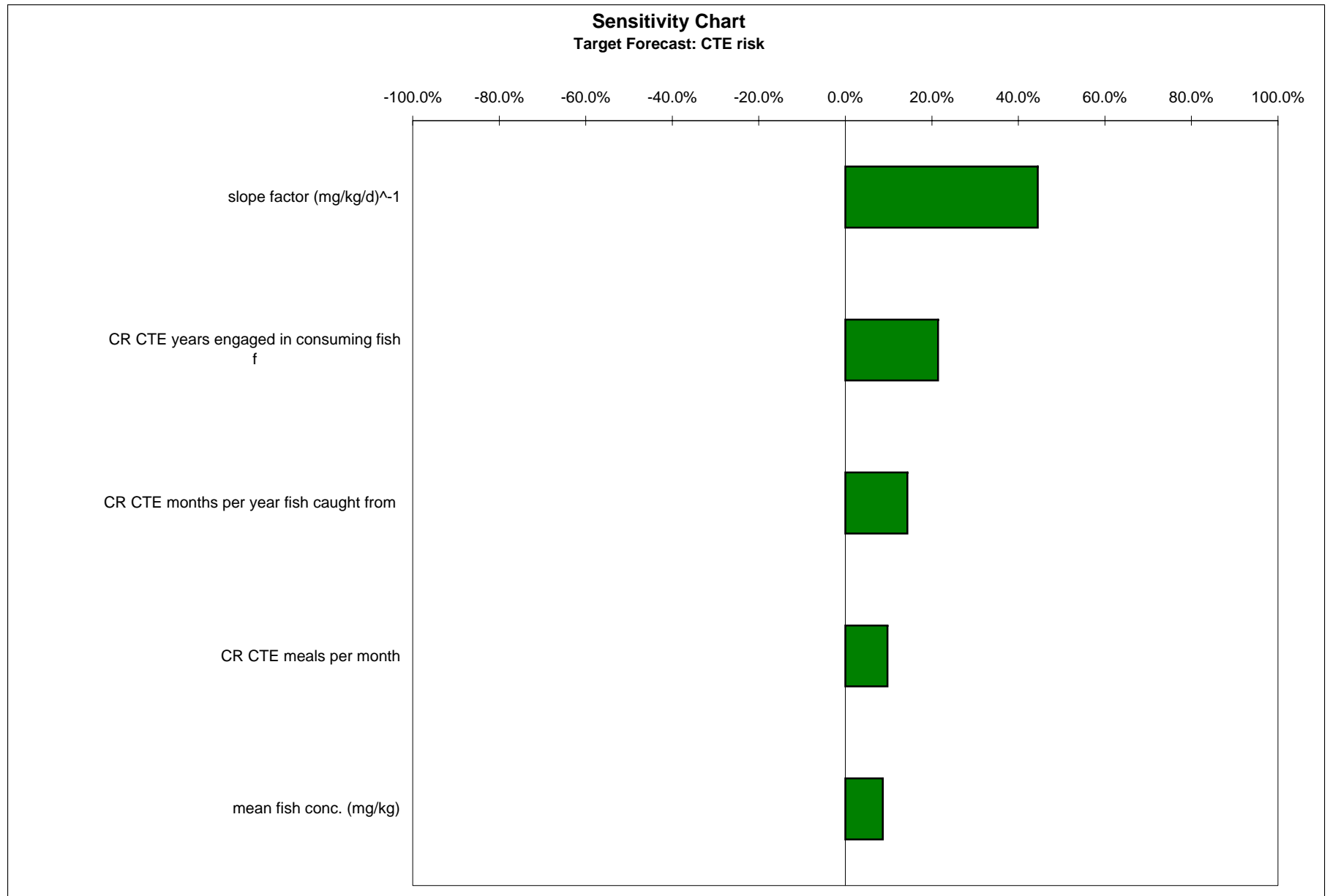
Selected range is from 1.00 to 10.00

End of Assumptions

CR RME sensitivity Template



CR CTE sensitivity Template



HI RME sensitivity Template

